

CLAIMS

1. A method of measuring brand exposure in a video stream, comprising the steps of:
providing a reference mask representing a trade mark;
5 capturing frames from the video stream;
searching each captured frame using the reference mask to determine a respective correlation value indicative of the likelihood of the presence of the trade mark of the mask in that captured frame in dependence upon correlation between the mask and part of that captured frame; and
10 calculating a brand exposure value for the video stream in dependence upon the determined correlation values.
2. A method as claimed in claim 1, wherein the determined correlation value for each frame has either of only two possible values.
3. A method as claimed in claim 1, wherein the determined correlation value for
15 each frame has one of a multiplicity of possible values.
4. A method as claimed in claim 3, wherein, in the calculating step, such a determined correlation value is taken into account only if that determined correlation value lies within a particular range of the values.
5. A method as claimed in claim 4, wherein, in the calculating step, the magnitude
20 of such a determined correlation value within said range is taken into account.
6. A method as claimed in claim 1, wherein:
each searching step includes the step of determining a respective scale value in dependence upon the scale of said part of the captured frame relative to the mask; and
in the calculating step, the brand exposure value is calculated in dependence upon both
25 the determined correlation values and the respective determined scale values.

7. A method as claimed in claim 1, wherein:

each searching step includes the step of determining a respective position value in dependence upon the position of said part of the captured frame relative to the complete frame; and

5 in the calculating step, the brand exposure value is calculated in dependence upon both the determined correlation values and the respective determined position values.

8. A method as claimed in claim 1, wherein:

the method further includes the step of providing an audience rating value; and

10 in the calculating step, the brand exposure value is calculated in dependence upon both the determined correlation values and the audience rating value.

9. A method as claimed in claim 8, wherein:

the provided audience rating value varies for different frames; and

15 in the calculating step, the brand exposure value is calculated in dependence upon both the determined correlation values and the respective audience rating values.

10. A method as claimed in claim 1, wherein, in each searching step, in the case of a plurality of presences of the trade mark of the mask in the frame, the method is capable of determining a plurality of correlation values for that frame.

11. A method as claimed in claim 1, wherein:

20 the reference mask is one of a plurality of different such reference masks representing the same trade mark; and

such searching steps are performed for each of the reference masks.

12. A method as claimed in claim 11 wherein a respective mask weighting value is provided for each reference mask; and

25 in the calculating step, the brand exposure value is calculated in dependence upon both the determined correlation values and the respective mask weighting values.

13. A method as claimed in claim 1, wherein:

the reference mask is one of a plurality of different such reference masks representing different trade marks;

such searching steps are performed for each of the reference masks; and
in the calculating step, a plurality of brand exposure values are calculated for the
different trade marks.

14. A method as claimed in claim 13 wherein a respective mask weighting value is
5 provided for each reference mask; and
in the calculating step, the brand exposure value is calculated in dependence upon both
the determined correlation values and the respective mask weighting values.

15 A method as claimed in claim 1, further comprising the steps of:
storing each of the frames which contributes to the brand exposure value(s); and
10 storing the respective value(s) determined from that frame.

16. A method as claimed in claim 1, wherein the calculating step comprises
summing the correlation values or a function of each correlation value.

17. A method of measuring brand exposure on screen within a broadcast
programme, comprising the steps of:
15 identifying at least one reference image mask representing a logo or other trade mark
indicia identifying the brand being advertised;
capturing frame images from the broadcast programme;
searching each captured frame image to identify if the likelihood of the presence of the
reference image mask is above a predetermined threshold; and
20 calculating the brand exposure in accordance with an algorithm that is a function of at
least the duration of exposure of the identified reference image mask.

18. A method of measuring brand exposure within a broadcast transmission,
comprising the steps of:
storing at least one reference image mask representing a logo or other trade mark
25 indicia representing a brand being advertised;
capturing a sequence of frame images from the broadcast;
running image searching software which outputs a parameter representing the
likelihood of the presence of each image mask in each captured screen image; and
computing a brand exposure measurement from at least said output parameters.

19. An apparatus for measuring brand exposure in a video stream, comprising:
means (such as a digital storage device) for providing a reference mask representing a trade mark;
means (such as a frame grabber) for capturing frames from the video stream;
5 means (such as a processor and associated memory) for searching each captured frame using the reference mask to determine a respective correlation value indicative of the likelihood of the presence of the trade mark of the mask in that captured frame in dependence upon correlation between the mask and part of that captured frame; and
means (such as the, or another, processor and associated memory) for calculating a
10 brand exposure value for the video stream in dependence upon the determined correlation values.
20. An apparatus as claimed in claim 19, wherein the determined correlation value for each frame has either of only two possible values.
21. An apparatus as claimed in claim 19, wherein the determined correlation value
15 for each frame has one of a multiplicity of possible values.
22. An apparatus as claimed in claim 21, wherein the calculating means is adapted to take a determined correlation value into account only if that determined correlation value lies within a particular range of the values.
23. An apparatus as claimed in claim 22, wherein the calculating means is adapted
20 to take into account the magnitude of such a determined correlation value within said range.
24. An apparatus as claimed in claim 19, wherein:
the searching means includes means for determining a respective scale value in dependence upon the scale of said part of the captured frame relative to the mask; and
25 the calculating means is adapted to calculate the brand exposure value in dependence upon both the determined correlation values and the respective determined scale values.

25. An apparatus as claimed in claim 19, wherein:

the searching means includes means for the determination of a respective position value in dependence upon the position of said part of the captured frame relative to the complete frame; and

5 the calculating means is adapted to calculate the brand exposure value in dependence upon both the determined correlation values and the respective determined position values.

26. An apparatus as claimed in claim 19, wherein:

the apparatus further includes means for providing an audience rating value; and

10 the calculating means is adapted to calculate the brand exposure value in dependence upon both the determined correlation values and the audience rating value

27. An apparatus as claimed in claim 26, wherein:

the provided audience rating value varies for different frames; and

15 the calculating means is adapted to calculate the brand exposure value in dependence upon both the determined correlation values and the respective audience rating values.

28. An apparatus as claimed in claim 19, wherein the searching means is adapted such that, in the case of a plurality of presences of the trade mark of the mask in the frame, the apparatus is capable of determining a plurality of correlation values for that
20 frame.

29. An apparatus as claimed in claim 19, wherein:

the reference mask is one of a plurality of different such reference masks representing the same trade mark; and

25 the searching means is adapted to search each captured frame for each of the reference masks.

30. An apparatus as claimed in claim 29 wherein a respective mask weighting value is provided for each reference mask; and

the calculating means is adapted to calculate the brand exposure value in dependence upon both the determined correlation values and the respective mask weighting values.

31. An apparatus as claimed in claim 19, wherein.

the reference mask is one of a plurality of different such reference masks representing different trade marks;

the searching means is adapted to search each captured frame for each of the reference masks; and

the calculating means is adapted to calculate a plurality of brand exposure values for the different trade marks.

32. An apparatus as claimed in claim 31 wherein a respective mask weighting value is provided for each reference mask; and

the calculating means is adapted to calculate the brand exposure value in dependence upon both the determined correlation values and the respective mask weighting values.

33. An apparatus as claimed in claim 19, further comprising.

means for storing each of the frames which contributes to the brand exposure value(s); and means for storing the respective value(s) determined from that frame.

34. An apparatus as claimed in claim 19, wherein the calculating means comprises means for summing the correlation values or a function of each correlation value.

35. An apparatus for measuring brand exposure on screen within a broadcast programme, comprising:

means (such as an image search processor) for identifying at least one reference image mask representing a logo or other trade mark indicia identifying the brand being advertised;

means (such as a frame grabber) for capturing frame images from the broadcast programme;

means (such as a processor and associated memory) for searching each captured frame image to identify if the likelihood of the presence of the reference image mask is above a predetermined threshold; and

means (such as the, or another, processor and associated memory) for calculating the brand exposure in accordance with an algorithm that is a function of at least the duration of exposure of the identified reference image mask.

36. An apparatus for measuring brand exposure within a broadcast transmission, comprising:

means for storing at least one reference image mask representing a logo or other trade mark indicia representing a brand being advertised;

5 means for capturing a sequence of frame images from the broadcast;

processor means for running image searching software which outputs a parameter representing the likelihood of the presence of each image mask in each captured screen image; and

10 means for computing a brand exposure measurement from at least said output parameters.